

NATURAL HISTORY.

HOW TO REAR YOUNG BIRDS.

DURING this summer of 1895 I have become interested in rearing young birds from their babyhood.

Some of you may say, "How cruel! What an idea to present to the children's minds!" But wait a moment before you come to this conclusion. Think of the mother bird, sometimes with more little ones than she knows what to do with, all crowding together in the nest, perhaps nearly able to fly. How often has not even the most casual observer seen corpses of our little feathered friends lying stiff and cold on the ground — the result of being pushed out of the home by their stronger brothers and sisters.

Now, why not lighten the domestic cares of the mother-parent and relieve her of the responsibility of some of her children? She will not miss them, and it will give us pleasure to have them.

It is not, however, every kind of bird which will submit to our treatment in the way of food. Those birds which only eat flies, etc., such as the swallow or redstart, will not live long on the food we are able to give them. It would be impossible to provide them with insects all their lives, and that is what would be absolutely necessary to their existence. I remember last summer finding a nest of redstarts in a hot-house; and one day, on paying them my usual visit, I noticed that the nest was empty, and thereupon concluded that my little friends had flown; however, after awhile the gardener (who had from the first taken an interest in them) brought me two little redstarts very nearly fledged, but who had been easily caught hopping about outside the house. As I wanted a couple of young birds for a lady who was ill, to rear, I took them, put them into a basket lined with some hay and a covering over them, and sent them to the invalid; however, in spite of the kindest treatment, the little creatures died, as the food which they had was not of an insect nature.

I also tried to rear a swallow which had hurt itself in falling out of its nest, but with no better success than with the redstarts.

Greenfinches are very satisfactory birds to bring up. Their nests are generally within easy reach, and they should be taken when their feathers are just beginning to grow; to take two is better than

one, because, beside being company for one another, they keep each other warm.

This summer my pupil and I brought up four greenfinches with great success, and they now appear to be as happy as the day is long, and help to cheer us on wintry days with their little attempts at song.

But to return to my principal topic, — as to how to rear them. When you have carefully taken them out of the nest, put them in a small basket lined with hay or any soft substance, then cover them over with a cloth so as to keep them warm. So long as they are *quite* young they should be fed constantly, say every half-hour at the least, but this need only last a few days, then they may be fed according to your judgment, whether you think they are hungry or not (I will not say that they will appear to be anything else but ravenous, but you must regard a great deal of that as greediness).

The best food you can have, and that which we brought up ours on so satisfactorily, can be bought in 2/- tins from Mr. Hawkins, 6, Bear Street, Leicester Square, London. It is called the Egg-mixture for canaries, etc. Mix some of this food with a little water and give the birds a small quantity on a clean quill pen. It is necessary sometimes at first to take the bird in your hand and almost force the beak open, but in the case of greenfinches and blackbirds, by experience, I find they soon get to know what the pen means when they see it hovering above their heads. This is a good thing to do at first, as they imagine that it is the parent bird bringing them food.

Do not give quite young birds water by itself, as we killed two in so doing, and after all, how should they want it? They certainly would not get it in the nest!

It is necessary for the first few days to take the birds with you to your bedroom at night, for they need feeding very early in the morning (I used to feed them sometimes at 3-30!), but 5-30 will do for one who is inclined to think them anything but a pleasure at that hour of the morning.

In the course of about a week your little charges will try to get out of the basket and will do their best to fly. This must be remedied by procuring a small cage. Put less hay this time, and gradually leave it off altogether and substitute sand. The birds must be watched when they get a little older to notice how soon they begin to peck for themselves, at which stage less food should be given them by means of the pen; let them learn to take it themselves, and by the

time you have had them a fortnight, very likely you will not have to feed them at all.

By degrees, canary seed and rape should be mixed with their food, with now and then a little hemp seed for a treat, and the egg food may be gradually dispensed with altogether.

I may say that I believe birds may be brought up on bread soaked in water, but it will not tempt them when first taken from the nest as well as the egg mixture.

All this time I have been dealing with greenfinches, with which I have had most experience, but there are no doubt many other birds which the same treatment would suit.

S. SMYTH.

BRIEF DESCRIPTION OF THE FLORA OF THE NEIGHBOURHOOD OF GODALMING.

THIS district is so extremely rich in wild flowers and in other objects of interest to the naturalist, that I now propose to give merely a brief and general sketch of the rare and local plants, together with a few others characteristic of the soil.

The district may be subdivided into three portions: the chalk ridge of the "Hog's Back," to our north; the heath and common land to our W. and S.W.; and the central division of cultivated sand. The disused chalk-pits of the Hog's Back form favourite haunts for the *Orchidaceæ*, seven specimens of that tribe having been found in one pit.

Among those that may be found in abundance are, the Pyramidal Orchis (*Orchis pyramidalis*); Sweet-scented Orchis (*Habenaria conopsea*); Tway-blade (*Listera ovata*), and Man Orchis (*Aceras anthropophora*), while Bee Orchis (*Ophrys apifera*), and Fly Orchis (*O. muscifera*) are rare.

Hairy Rock Cress (*Arabis hirsuta*) flourishes on the face of the quarries, and on the sloping debris may be found plentifully:—Wild Mignonette (*Reseda lutea*); Hairy Violet (*Viola hirta*); Common Buckthorn (*Rhamnus catharticus*); Lady's Fingers (*Anthyllis Vulneraria*); Tufted Horse-shoe Vetch (*Hippocrepis comosa*); Saint-foin (*Onobrychis viciifolia*); Salad Burnet

(*Poterium sanguisorba*); Squinancy-wort (*Asperula cynanchica*); Round-headed Rampion (*Phyteuma orbiculare*); Bastard Toad-flax (*Thesium humifusum*), and Juniper (*Juniperus communis*).

On those level surfaces one meets with the handsome Autumnal Gentian (*Gentiana amarella*); the apparently stemless Dwarf Plume Thistle (*Carduus acaulis*); Carline Thistle (*Carlina vulgaris*); and occasionally perfoliate Yellow-wort (*Chlora perfoliata*). The Common Yew (*Taxus baccata*) is very abundant here, and often attains a good old age.

By the sides of cornfields are to be found:—Common Parsnep (*Peucedanum sativum*); Knotted Hedge Parsley (*Torilis nodosa*); Wild Carrot (*Daucus carota*), distinguished from all other parsleys by its central crimson flower; Yellow Goat's Beard (*Tragopogon pratensis*); Hank-weed Picris (*P. hieracioides*); Round-leaved Toad-Flax (*Linaria spuria*); Sharp-pointed Toad-Flax (*L. Elatine*) and Least Toad-Flax (*L. minor*).

Forming a hedge on the top of the ridge:—Privet (*Ligustrum vulgare*); Mealy Guelder Rose (*Viburnum Lantana*); and Dog-wood (*Cornus sanguinea*) grow in abundance; while in the grass beneath them are Milk-wort (*Polygala vulgaris*)—of various hues—and Rock Rose (*Helianthemum vulgare*) in luxuriant masses.

Besides the *Orchidaceæ* mentioned before, the Clustered Bell-flower (*Campanula glomerata*) and Bristly Ox-tongue (*Helminthia echinoides*) may be found in some of the discontinued chalk quarries, and there is still some woad to be found in one, not far from Guildford.

In the central division, the cultivated sandy soil, among the rare or local plants may be mentioned:—Common Alexanders (*Smyrniolus Olusatrum*); Common Soapwort (*Saponaria officinalis*); Climbing Corydalis (*C. Claviculata*), which grows in profusion in a spot that it likes; Bird's-nest Orchis (*Listera nidus-avis*) in a wood near Guildford; Common Henbane (*Hyoscyamus niger*); Balsam (*Impatiens fulva*), near the junction of the Wey with the Thames; and Greater Dodder (*Cuscuta Europæa*), parasitical on thistles and nettles, in a meadow close by.

In a stream near Unstead, the alternate-leaved and opposite-leaved Golden Saxifrages (*Chrysosplenium alternifolium* and *C. oppositifolium*) grow in abundance, while the same stream is the home of the Creeping Water-cress (*Nasturtium sylvestre*).

Hairy Pepperwort (*Lepidium Smithii*) has been found not far from Hascomb, and Mountain St. John's Wort (*Hypericum montanum*), remarkable for the black fringe of its sepals, and Shining Cranesbill (*Geranium lucidum*) flourish on most of the hedge

banks. White Bryony (*Bryonia dioica*), and in some parts Traveller's Joy (*Clematis vitalba*), trail luxuriantly over the hedges and in most of the sandy lanes. Wall Lettuce (*Lactuca muralis*) finds a home in crevices of old walls, and the handsome nettle-leaved Bell-flower (*Campanula Trachelium*) grows to a fine size.

About two miles from Godalming, on the Portsmouth Road, Hound's Tongue (*Cynoglossum officinale*) is to be found, remarkable for its disagreeable odour (closely resembling that of mice) and its curious prickly fruit.

The third division consists of the vast heath and common lands lying to the W. and S.W. of Godalming, on which are found in abundance Cross-leaved and Fine-leaved Heaths (*Erica tetralix* and *E. cinerea*) and Ling (*Calluna vulgaris*), often matted together by the luxurious growth of the Lesser Dodder (*Cuscuta Epithymum*). The margins of ponds, and the marshy ground which occur frequently among these commons, afford famous hunting grounds for bog-plants, among which may be mentioned:—the Marsh Violet (*Viola palustris*), Sundew (*Drosera rotundifolia* and *D. intermedia*), Rose Bay Willow (*Epilobium angustifolium*), with its handsome and conspicuous rose-coloured flowers; Ivy-leaved Bell-flower (*Campanula hederacea*) mingled with the Marsh Cranberry (*Vaccinium oxycoccus*); Lesser Skull-cap (*Scutellaria minor*); Bog Asphodel (*Narthecium ossifragum*); Bog Pimpernel (*Anagallis tenella*); and Marsh Red Rattle (*Pedicularis palustris*).

These delightful haunts of so many beautiful wild flowers, and not only flowers, for this part of the world is also rich in birds and insects, are in quite easy reach of London, it being only three-quarters of an hour's journey. The best station for the Commons is Milford, and once on these commons, which happily can never be built upon, one may spend many pleasant hours, particularly by the margins of the various ponds in the low-lying portions of the heath.

Sept. 28, 1895.

VIOLET PAGE.

OCTOBER LIST OF FRUITS.

(From the House of Education.)

- | | |
|---------------------------|----------------------------|
| 1 Hogweed. | 32 Guelder Rose. |
| 2 Yew. | 33 Water Avens. |
| 3 Meadow-sweet. | 34 Self-heal. |
| 4 Bird Cherry. | 35 Dandelion. |
| 5 Mouse-ear Chickweed. | 36 Spindle-tree. |
| 6 Figwort. | 37 Barren Strawberry. |
| 7 Oak. | 38 Fertile Strawberry. |
| 8 Ash. | 39 Cathartic Flax. |
| 9 Lime. | 40 Honeysuckle. |
| 10 Sycamore. | 41 Corn Spurrey. |
| 11 Good King Hal. | 42 Mountain Ash. |
| 12 Upright Hedge Parsley. | 43 Thistle (Scotch). |
| 13 Old Man's Beard. | 44 Marsh Plume Thistle. |
| 14 Orpine. | 45 Golden Rod. |
| 15 Raspberry. | 46 Willow Herb (lesser). |
| 16 Herb Robert. | 47 Apple. |
| 17 Mountain Rose. | 48 Tutsan. |
| 18 Campion. | 49 Heather. |
| 19 Medick. | 50 Broom. |
| 20 Horse Chestnut. | 51 Tuberous Bitter Vetch. |
| 21 Hawthorn. | 52 Stitchwort. |
| 22 Woundwort. | 53 Violet (dog). |
| 23 Wood Betony. | 54 Enchanter's Nightshade. |
| 24 Blackberry. | 55 Avens. |
| 25 Hazel. | 56 Field Scabious. |
| 26 Mouse-ear Hawkweed. | 57 Sheep's Bit. |
| 27 Wild Rose. | 58 Foxglove. |
| 28 Groundsel. | 59 Agrimony. |
| 29 Nipplewort. | 60 Melick Grass. |
| 30 Wall Lettuce. | 61 Sanicle. |
| 31 Holly. | 62 Bryony. |